

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (original): An apparatus comprising:

a threshold detector having a current comparator to determine if an input signal exceeds a threshold.

Claim 2 (original): The apparatus of claim 1, wherein the threshold detector comprises a differential amplifier stage having an input stage comprising a first transistor and a second transistor having collectors and emitters coupled together.

Claim 3 (original): The apparatus of claim 2, wherein the differential amplifier stage has a reference stage having a third transistor and a fourth transistor, the third and fourth transistors having emitters coupled to the emitters of the first and second transistors.

Claim 4 (original): The apparatus of claim 3, wherein the reference stage is coupled to receive a voltage reference from a half differential amplifier stage.

Claim 5 (original): The apparatus of claim 4, further comprising a current source to bias the reference stage and a limiting amplifier coupled to the threshold detector.

Claim 6 (original): The apparatus of claim 1, wherein the threshold detector is coupled to detect a loss of a received signal input into a limiting amplifier.

Claim 7 (original): The apparatus of claim 6, wherein the received signal is derived from a high frequency optical signal.

Claim 8 (original): The apparatus of claim 6, wherein the threshold detector is coupled to detect an absolute value of a differential stage output of the limiting amplifier.

Claim 9 (original): The apparatus of claim 2, further comprising cross-coupled transistors coupled between the input stage and a resistor load to provide a feedback gain to the input stage.

Claims 10-16 (cancel)

Claim 17 (original): A method comprising:

determining an absolute value of a differential input; and
comparing the absolute value to a reference signal using a current comparator.

Claim 18 (original): The method of claim 17, further comprising providing a common mode direct current feedback signal to a current source.

Claim 19 (original): The method of claim 17, further comprising providing an output of the current comparator that is indicative of a loss of received signal of an optical communication system.

Claim 20 (original): The method of claim 17, further comprising receiving the differential input from a limiting amplifier.

Claims 21-29 (cancel)

Claim 30 (previously presented): An apparatus comprising:
an absolute value detector to receive a differential input;
a cascode current comparator coupled to an output of the absolute value detector; and
a latch coupled to the cascode current comparator.

Claim 31 (previously presented): The apparatus of claim 30, further comprising a current source to provide a source current to the absolute value detector.

Claim 32 (previously presented): The apparatus of claim 31, further comprising a reference circuit coupled to receive the source current and generate a tracking reference signal to the cascode current comparator.

Claim 33 (previously presented): The apparatus of claim 32, further comprising a common mode feedback circuit coupled to receive the output of the absolute value detector and the tracking reference signal and to generate a feedback signal to be provided to the current source.

Claim 34 (previously presented): The apparatus of claim 30, further comprising a differential current comparator coupled between the cascode current comparator and the latch.

Claim 35 (previously presented): The apparatus of claim 30, further comprising a plurality of buffers coupled to the latch to generate a differential output representative of a loss of received signal of the differential input.

Claim 36 (previously presented): The apparatus of claim 35, wherein the plurality of buffers each comprises a Darlington circuit.

Claim 37 (previously presented): The apparatus of claim 32, wherein the reference circuit comprises a plurality of Schmitt triggers.

Claim 38 (previously presented): The apparatus of claim 37, wherein the plurality of Schmitt triggers comprise a first Schmitt trigger having an output coupled to an input of a second Schmitt trigger.